Over Two Thousand Acres of New Land Are Put Into Cultivation In the Rio Grande Valley In Year 1912

Total Cultivated Area Under Rio Grande Project Is Now Over 80,000 Acres

Great Project When Completed Will Cost \$10,000,000 and Will Irrigate 180,000 Acres and Possibly 225,000---Even In Its Present State, the Valley Is Yielding Rich Returns--Crop Report For Year Closed.

has been in progress for three years past. All the preliminary and five per-cent of the permanent work had been completed at the beginning of the

completed at the beginning of the present year.

Not only will the dam supply water for irrigation to New Mexico and west Texas, but it will deliver to the Mexican government a sufficient amount of water annually to irrigate all land that was in cultivation in that country opposite El Paso prior to the stoppage of the flow of the Rio Grande by timbering operations in New Mexico and Colorado.

Portions of the completed project are now in use and a large area of

The annual report of the engineers charge of this work for the rec-

ago.
Some difficulty was experienced during the year with farmers falling to use the water correctly, the report says; there was also some damage from floods, especially where ditches take the water from the river direct. These flood conditions will be obviated when the dam is completed and the farmers are being given expert advice on the proper use of the water. The report of the reciamation officials follows:

Location and Irrigable Area. gable area under the Elephant Butte storage reservoir is determined by beginning at a place located about six miles below the Elephant Butte dam, in New Mexico, and ending at Fabens, Texas, a station on the Southern Pacific rallroad about 35 miles below Ell Pasc, or a total distance of about 150 miles. This area is easily segregated into five distinct irrigable valleys, and at present a portion of each of the valleys, excepting the Falomas valley, is irrigated from the natural flow of the Rio Grande, by each irrigated district owning and controllies their respective community ditches leading from the river. Beginning at the north end of the Rio Grande project, directly under the Elephant Butte dam, the valleys are located as follows: (1) Palomas, (2) Rincon, (3) Mesills, (4) El Pasc, and (5) Juarez, Mex, and contain a total irrigable area of about 222,772 acres, of which it is proposed that about 180,000 acres will receive storage waters under the completed Rio Grande project.

Of this irrigable area, 68,515 acres were irrigated during the season of 1910, and 78,390 during the season of 1910, and 78,390 during the season of 1911, while 80,490 acres were irrigated during the season of 1911, while 80,490 acres were irrigated during the season of 1911, and 78,390 during the season of 1912.

Irrigation Supply for 1912.

during the season of 1912.

At present, throughout the entire irrigated districts only the natural flow of the Rio Grande' is available for irrigation; therefore, each season carries with it the uncertainty of water supply, while during the season of 1912 there has been only two periods of short duration when sufficient water was not available and these did not affect the districts served by the Leasburg diversion dam or those above. The irrigated districts under the Leasburg diversion dam (the completed unit of the Rio Grande project) were served with ample water during the season of 1912, having been supplied with approximately 5.07 acre-feet per acre.

The quality of water was excellent.
carrying a very small percentage of silt or sediment as compared with

silt or sediment as compared with other years.

Four small pumping plants were added to the number already existing, but none were used to any great extent except in the El Paso valley.

The Elo Grande reached a maximum flow of 15,960 second feet at El Paso on June 3, 1912, or 1900 second feet more than were recorded as the maximum of 1911, with a minimum of about 20 second feet at Selden, N. M., on October 12, 1912. As the irrigation season was practically over, this shortage was not felt.

General Conditions and Results.

About 50 per cent of the irrigated lands are planted in alfaifa, 20 per cent in corn, 9 per cent to small grain and 11 per cent to orchards, vineyards, gardens and miscellaneous crops. Alfaifa is generally the most successful crop grown and gives the best net return. The yield for 1912 has been slightly below normal, producing an average of about three tons per acre. The corn crop varied from poor to excellent in localities where it suffered no drouth.

The season was very favorable for small grain, but there was a very small screage planted, the yield was good and quality excellent, except in El Paso valley, where it was badly damaged by hall.

The Frait Industry.

With the present uncertainty of General Conditions and Results.

With the present uncertainty of cial orchards or vineyards under the Rio Grande project which are bearing, at present, a great deal of attention is being paid to the fruit industry and a considerable area is being planted to fruit each year, especially pears, which do remarkably well.

Late frosts damaged the peach, plum and grape crop about 50 per cent; also the apple and pear crop in the Rincon valley, while in other localities appies and pears gave a fair yield and in many instances where they were sprayed bore to the full capacity of the trees. The fruit growers seem to be rather slow to realize the value of protecting trees against late frosts and insects. As very few spray it increases the burden on those who do.

Very little commercial or barnyard fertilizer is being used; as a consequence some of the land which has been in cultivation for a good many years is beginning to show the effects, especially among the natives.

The corn crop was damaged considerably in account of not having water to mature it, and will give an average yield of only about 18 bushels per acre. The alfalfa crop was considerably in account of not having water to mature it, and will give an average yield of only about 18 bushels per acre. The alfalfa crop was considerably in a considerably in the season of some cutting of and damaged the corn and bean crops below normal on account of the late with an average of 25 bushels per acre with an average of 25 bushels per acre againty late quality was better than during but the quality was better than during but the quality was better than during but the quality was better gality of seed. Only a small better gality of seed. Only a small

While there has been no shortage of water, a number of the communities have experienced a lack of water for short periods, partly through being unable to divert water from the river during low stages and immediately after high water on account of having their intakes damaged. The community, the La Union, estimate that they have been damaged approximately \$50,000 by this condition.

In anticipation of the early completion of the Rio Grande project, none of the communities feel justified in going to any very great expense to construct permanent headworks or tanything but temporary diversion dams.

The Palomas valley
The Palomas valley begins about
six miles below Elephant Butte dam,
and extends 18 miles below to a narrow gorge in the river banks. It contains the first irrigable lands to receive storage from the Elephant Butte
reservoir. Estimates show this valley
to contain approximately 2848 acres
on the east and 8912 on the west side
of the river, or a total of 9862 acres
of irrigable land. Owing to the shifting of the river and the topographical

on the east and 5913 on the west side of the river, or a total of 9862 acres of irrigable land. Owing to the shifting of the river and the topographical conditions of the country, it is almost impossible to maintain a ditch in this locality; therefore, no attempt has been made to irrigate these lands for a number of years, although at some former time about 500 acres were watered from a ditch owned by a cattle company. No lands have been irrigated during the season of 1912.

Rincon valley, New Mexico.

Rincon valley begins at a narrow gotze in the river at the south end of Palomas valley and extends about 40 miles below to the Leasburg diversion dam at Seiden, N. M.

It is the second valley to receive storage water from the Elephant Butte storage reservoir, and estimates show it to contain approximately 18,800 acres on the east and 11,630 on the west side of the river, or a total of 20,430 acres for the entire valley. A farm unit survey is being made of the Rincon and Palomas valleys, which, when completed, will give a more correct estimate of the irrigable area in the valleys. Portions of the valley are furnished with irrigation water from the natural flow of the river at various intervals by fine community ditches leading from the river, using temporary dams of brush and sand to divert the waters during low stages of the river. The walley contains four distinct irrigated districts, that is, Mill Bosque, Garfield, Colorado and Tonuca.

Mill Bosque district, the first and north district on the west side of the river and partly from run-off from a number of large arroyos, which discharge into the acequia arroyo Bonito. The lower portion of the acequia arroyo Bonito was not cleaned out this year and as a consequence about 100 acres in the immediate vicinity of Mill Bosque which were cultivated during

across Bonto was not cleaned out this year and as a consequence about 100 acres in the immediate vicinity of Mill Bosque which were cultivated during 1911 falled to receive any water by irrigation, but were dry-farmed with small success.

The Garfield District.

The Garfield District.

The Garfield district, the second district of the Rincon valley, all on the cast side of the river, trigated during the season of 1912, under the San Ysidro community ditch, a total of about 3000 acres. During the months of May and June considerable trouble was experienced on account of high water and consequent shifting of the river channel, making it very difficult to maintain a permanent heading in the river.

river.
The appended table will show the The appended table will show the approximate cost of maintenance and distribution of same. Of the last item in the table, canal maintenance, the major portion was expended on the construction of permanent flumes across a number of arroyes which gave considerable trouble during the season of the contraction.

Frosts Damage Fruit

Frosts Damage Fruit

Late frosts destroyed practically all the fruit with the exception of the apple crop, which will be about one-half of the normal; also held the alfalfa back so that a number of the farmers secured only three cuttings. Excessive rains during the latter part of July, all of August and a part of September caused a total loss of practically all of one cutting of alfalfa and damaged the corn and bean crops considerably. The wheat yield was below normal on account of the late spring, being from 12 to 43 bushels per acre with an average of 25 bushels, but the quality was better than during past years, due to the planting of a better quilty of seed. Only a small acreage of onts and barley was planted.

The Colorado District

ELEPHANT BUTTE dam, the biging 125 miles north of El Paso,
to reclaim 180,000 and possibly 225,000
am, when completed, will impound a
lake of water 40 miles long, that will
completely obliterate five former towns
in the valley above it and will hold
the total annual flow of the Rio Grande
for three years. The cost of the dam
when completed will be \$10,000,000 or
more.

The United States reclamation sorrice is constructing the dam and work
has been in progress for three years
past. All the preliminary and five per
cent of the permanent work had been
completed at the beginning of the
more than the preliminary and five per
cent of the permanent work had been
completed at the beginning of the
water possible when his turn
completed at the beginning of the
water possible when his turn
completed at the beginning of the
water possible when his turn
completed at the beginning of the
water possible when his turn
completed at the beginning of the
water possible when his turn
completed at the beginning of the
water possible when his turn
completed at the beginning of the
water possible when his turn
completed at the beginning of the
Not only will the dam supply water
for irrigation to New Mexico and west
Texas, but it will deliver to the Mexican government a sufficient amount
of water annually to irrigate all land
for irrigation to New Mexico and control of the permanent
of water annually to irrigate all land
of water annually to refrest all land
of water an

The Upper Westside Ditches
The seven remaining ditches, all on the west side of the river (except a small acreage under the White ditch, east side, but having the same local conditions) obtain their water from their respective ditch headings direct from the river and in each instance have experienced the same diffculties as the Bincon valley, of temporary diversion dams at low stages of the fiver; while during the flood scasons oftentimes various ditch headings were washed away entirely, or the head of the ditch filled with silt and sediment. During the high stage of the river in the months of May and June practically all of the canals suffered considerable damage either by having their headgates carried away or the river shifting away from the headings.

Suffer from Floods

having to drop their work during the busy season in order to repair damage to canals and reconstruct headings. As the same general conditions have been experienced by the ditches on the east side of the river receiving their water from the Leasburg canal, they will be tabulated under one heading, the remainder of the canals will be treated under one heading, as they have encountered approximately the same general conditions.

The estimated acreage under the ditches receiving their water from the Leasburg canal will show some changes in the irrigated areas, and while there

in the irrigated areas, and while there has been a general increase in the acreage under the various ditches, in several instances a decrease is shown, but this apparent discrepancy is mere-

but this apparent discrepancy is merely a more accurate estimate of the areas cultivated and is based upon a survey made in order to determine the amount of water being used per acre.

Growth of Alfalfa.

Some of the fields which have been planted to alfalfa from 10 to 25 years, gave a yield of only two and a half to three tons, while fields of three to six years yielded from four to five tons, and in several instances six tons, where more improved methods of cultivation and irrigation were used.

The corn crop was excellent where it has been properly cultivated and has yielded as high as \$70 bushels per acre in one or two instances.

Growth of Small Grains

There was a considerably smaller

Growth of Small Grains
There was a considerably smaller acreage of small grain sown during the year of 1913 than in former years, but both quality and quantity are above the average, being practically free from rust or smut. Fruits, with the exception of apples and pears, were badly damaged by frosts during April and May. Apples and pears, where they were sprayed and properly handled, bore to the full capacity of the trees, but where these precautions were omitted, the coddling moth and age.

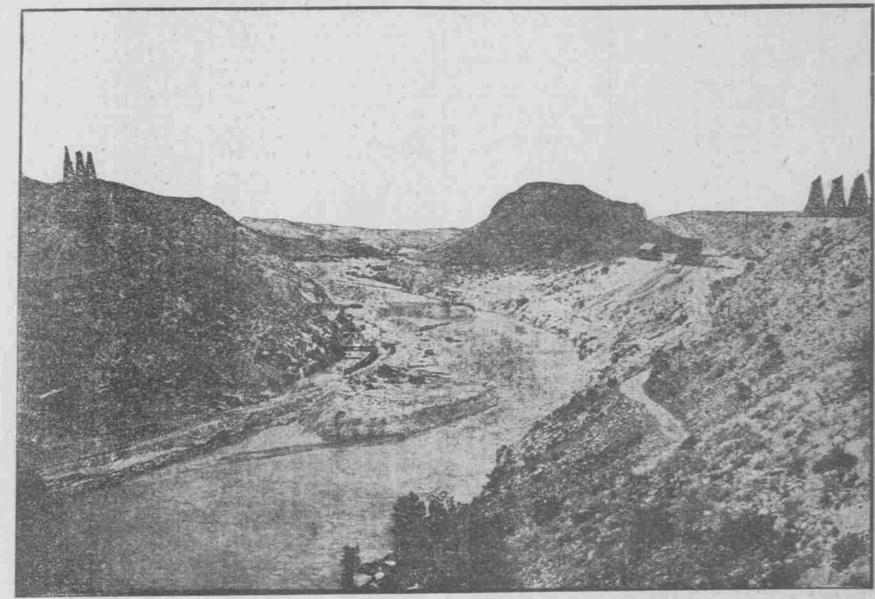
Only a small acreage of cantaloupes Only a small acreage of cantaloupes and melons was planted, the yield was good and the returns very fair. Other crops, such as onlons, sweet potntoes, tomatoes, cabbage, etc., gave excellent yields and found a ready market locally, with good returns.

Excessive rains during the latter part of Angust damaged the alfalfa and small grain, not only the unharvested crops, but, hay which was baied and stacked in the field.

High Water Destroys Alfalfa.

High Water Destroys Alfalfa.

Site of Elephant Butte Dam, Showing Work In Progress On the Excavation and the Big Flume



acres of alfalfa were destroyed by the high water in the river. A portion of this was replanted to corn and sorghum. Approximately 150 acres of alfalfa, corn, wheat and other crops, under the Dona Ana and Las Cruces ditches, were practically destroyed by the months of August and September, overflow from several large acroyos.

to being unable to divert the water allow water), during the Dona Ana and Las Cruces inder the Dona Ana and Las Cruces litches, were practically destroyed by verflow from several large arroyos. The same general conditions, as The Same general conditions as The El Passo valley all on the cast and crops suffered considerably but the droub was broken in the droub was the distinct of the Rio Grande, extends from the droub was the distinct of the Rio Grande, extends from the droub was the distinct of the Rio Grande, extends from the droub was the droub was the distinct of the Rio Grande, extends from the droub

Name of Valley. 1. Las Palomas				5,625 28,760 14,733 10,500		5,460 46,590 14,840 10,500		1771gated 1912 6,690 42,732 17,568 10,500		d I	9,862 20,430 100,258 40,316 41,206		Pct. Irrigable Area 0 22 45 42 25	
Total			18 100	69,618 [78,390		80,490			222,772		36	
			TA	_	-	Tops f				3.71	1,3	150	- F-S-5	
Name of Valley	Alffa	Corn	Wh't		Bar	Beans			Orch	Gra	p's	Misc	Total	
L Las		1	1.0				_		_	_	-			
Palomas 2. Rincon .	2390	2392		0	10	560		0	120		0	495	6696	
Palomas 2. Rincon . 3. Mesilia L. D. D. E.	2390 16740	2392	810		1.0	0 560 234		61	0 120 445		30	495		
Palomas 2. Rincon .		2392 3767 5973 2679	810 1020 2522 415	262 489 226	10 28 330		1					405 428	22111 22617 17565 10500	

Areas of Various Crops for Season of 1912 Alffa | Corn Wh't Oats Beans gh'm ard ley Grps Misc. *3509 1085 312 125 123 15 29 9213 2032 682 122 45 130 360 28 1018 650 26 15 16 16 56 354 12981 15 | 56 | 4853 16740 3767 1020 262 234 161 445 28 30 428 22115 *Star includes 297 acres of overflowed land. West Side of River With Various Community Headings. Alf'fa Corn Wh't Oats Beans gh'm ard ley Grps Misc. Total

11515 5973 | 2522 | 489 | 530 175 | 495 | 330 | 14 | 574 | 22617 The El Paso Valley. Alffal Corn Wh't Oats ley ghum Beans and Truck Misc. Total San Eli-zario Island 32 45 25 25 15 .. 12083 2679 415 226 | 54 | 201 | 327 | 338 | 246 | 999 |

Good Opening in El Paso For Many Factories on Large Scale

WHILE El Paso is a leader in many industries, there is an open field here for many other manufactories. There are several industries, some represented in a small way, others having business men believe would be successful if brought into this city. Foremost, possibly, is the necessity and the opening for a furniture factory. The lumber is near at hand in Mexico, with the biggest finishing mills in the country located here, and no furniture factories closer than the great

lakes and a territory of tremendous area to consume the output of an El Paso factory. A cotton manufacturing mill is another of these. It is argued that this is an ideal location for such a business. While this is not a cotton growing section, this is not necessary for cotton mills. England grows no cotton, but the greatest cotton mills in the world are located in Manchester.

A big canning factory for chili, beans and tomatoes, it is believed, would be a paying proposition. A sufficient quantity of these crops is raised here annually to maintain such an establishment. Fruit is not grown in a large enough quantity as yet because so many farmers devote their attention to raising different varieties instead of only one. An iron and steel mill has been suggested because iron ore is plentiful in Mexico and New Mexico and coal

is also to be had there in abundance. A fertilizer factory for manufacturing this all important product from gypsum and guano deposits of New Mexico and old Mexico would do well. Alfalfa is the staple product of this section. Therefore an affalfa grinding mill is suggested. One is virtually

A lithograph plant is needed. A woolen mill, which could secure its raw product from New Mexico, might be established. Iron stoves and iron bedsteads could be made here and sold at a good profit throughout the southwest. A tannery and a harness and saddlery factory on a large scale is also suggested.

assured for Clint, 30 miles east of El Paso, but there is room for another.

the natural flow of the river, by six different community ditches leading direct from the river and operating under similar difficulties as the upper valleys, with ditches leading direct from the river without permanent healings.

Early in the season of 1912 three community ditches, that is, the Clint. Salitral and Elizario, lost their headings by high water and thereafter received all of their water through the

The Crop Production For 1912 Under the Elephant Butte Project Areas of Various Crops for S cason of 1912 in Rincon Valley.

Name of District | Alf'fa | Corn | Wheat Beans| Orch'd | Oats | Barley Miscel

Garfield	40 300 00 1227 20 795 30 70 90 2392	100 600 110	200 320 560	60 45 15	3	10	120 189 150 35	500 3000 2490 150
TABUI	LATED S	UMMAI	RY OF	CROP	REPO	RT	1,54	
Name of Crop.	Area in	CONTRACTOR CONTRACTOR	Estli	mated ield	Esti	mated	I Va	due Acre
Alfalfa Corn Wheat Oats Barley Beans Sorghum Orchard Grapes Garden truck Miscellaneous	16, 5,	728 611 867 980 422 151 537 498 44 246 106	394,1 143,5 43,4 18,6 1,595, 1,792 4,263,5	90 T 97 bu. 91 bu. 193 bu. 193 bu. 150 lbs 150 lbs	278 105 21 17 56 17 99 .6	,651.25 ,090.70 ,141.05 ,053.28 ,866.75 ,814.50 ,460.00 ,825.00 ,420.00 ,420.00 ,400.00		16.75 18.65 23.50 42.10 26.45 32.40 66.60 145.90 100.00 40.90
Total	- 80,	490			2,195	462.53	1	27,30

Name of Crop	Areas In Acres		Max'm un	1	Per Unit		Value
Alfalfa Corn Wheat Beans Orchard Oats Barley Miscellaneous	2390 2392 810 560 120 3 10 405	3 T 18 bu. 25 ¼ bu.	5½ T 40 bu. 43 bu. 12,000 lbs 8000 lbs	Total 1,170 T 43,056 bu 20,453 bu 448,000 lbs 282,500 lbs 112,5 bu 625 bu	.85 .05 .02	\$68,118,0 32,292.00 17,385.05 22,400.00 6,000.00 81,38 348,73 30,256.00	13.50 21.46 40.00 50.00 20.53 24.38
Total	6690				الشاا	168847.68	
Ме	villa V	alley. E	anst S file	of River.	1		
Name of Crop	Areas		Yields Max'm um	-			Value per A
Alfalfa	16740 2767	3 % T 24 bu	6 T 70 bu.	54.405 T	\$10,00	[544,050]	\$32,50

Rincon Valley.

	Areas in	Aver'g	Yie Max'm	Tam		Per Unit	ated Value	alue
Name of Crop		per A				of Meas		er A
Alfalfa Corn Wheat Onts Reans Sorgaum Orchard Grapes Miscellaneous Barley	2767 1020 262 234 161 445 30	30 bu. 55 bu. 900 lbs 3% T 3000lbs 4800lbs	70 40 100 1,500 6 24,000 4800	bu. bu. bu. Ibs T Ibs	54,405 T 90,408 bu. 30,600 bu. 14,410 bu. 210,600 lbs 564 T 1335000 lb: 144,000 lbs 1,260 bu.	.70 .75 .53 .03 10.00 .0216 .63	63,285,60 22,950,00 7,637,30	16.80 22.86 29.16 27.00 35.00 75.00 14.40 50.00

124 1042		X10.	101	e of River	Esti	mated Val	
TARREST OF FEMALE SPECIALS	Aver'g	Der	Δ.	Total	Per Unit	Total	Der J
Afraira 11315 Corn 5973 Wheat 2522 Oats 483 Beans 533 Sorghum 175 Orchard 495 Grapes 14 Barley 330 Miscellaneous 574	3% T 30 bu 30 bu 50 bu 800 lbs 3 T 22501bs 50001bs 45 bu.	5 69 40 85 1400 432 17,000	bu. bu. bu. lbs.	31668 % T 179190 bu, 75,660 bu, 24,450 bu, 424,000 lbs	.70 .75 .53 .63 9.00 .02	125,483,00 56,745,00 12,958,50 12,520,00 4,725,00 22,275,00 21,100,00 14,850,00 28,700,00	21.00 22.50 24.00 27.00 45.00 45.00 50.00
Total						[564,002.75]	24.43
Ell Paso V	alley of	the R	la (Grande Pro	ject		
[AFea:	Aver's	Yie	Eds		Estim per Unit	ated Value	Value

	-					0.04"20.04"11	
Ei I	enso Va	lley of	the Rio	Grande Pr	olect		
Name of Crop	Acres	Aver's	Yields Max'mum		Estima per Unit of Mens	Total	Vali
Alfalfa Corn Wheat Oats Barley Sorghum Beans Orchard Garden Truck Miscellaneous	2679 415 226 54 201 327	17 bu. 12 ½ bu. 20 bu. 25 bu. 3 ½ T 650 lbs 4000lbs	35 bu. 26 bu. 45 bu. 40 bu. 614 T	45,543 bu. 5,188 bu. 4,520 bu. 1,350 bu. 703 % T 212,550 bbs 1352000 bs	30	162,190,00 31,830,18 3,831,00 2,295,60 1,350,00 7,035,00 6,378,50 23,800,60 24,600,00	11. 10.